

1. (currently amended) A proof generation method for proof printers, comprising the steps of:

receiving halftoned primary color print data to be printed on a target halftone printing press, wherein the halftoned primary color print data has been produced by a first halftoning technique, and wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

applying a second halftoning technique to the print data, wherein the first and second halftoning techniques are different, and

providing the data to a proofing printer different from the target halftone printing press, wherein the first and second halftoning techniques are selected to:

(a) cause a dot size in the data provided to the proofing printer to substantially match a dot size for the halftone printing press; and

(b) cause a proof produced by the proofing printer to substantially match the color of a print produced by the target halftone printing press.

2. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique applies a half-toning technique that employs constantly spaced dots of variable sizes and wherein the step of applying a second halftoning technique applies a stochastic halftoning technique to the constantly spaced dots of variable sizes.

3. (previously presented) The method of claim 1 wherein the print data are color print data including a plurality of color-separated data subsets and wherein the step of applying a first halftoning technique and the step of applying a second halftoning technique are applied to the data subsets.

4. (previously presented) The method of claim 3 wherein the step of applying a first halftoning technique employs dots from a first set of primary colors and wherein the step of applying a second halftoning technique adds at least a second of the primary colors to a portion of one or more of the dots assigned to a first of the primary colors based on the first halftoning technique.

5. (previously presented) The method of claim 4 wherein the step of applying a first halftoning technique employs dots from a first set of primary colors and wherein the step of applying a second halftoning technique adds at least a first additional color to a portion of one or more of the dots assigned to a first of the primary colors based on the first halftoning technique.

6. (previously presented) The method of claim 3 wherein the step of applying a first halftoning technique employs dots from a first set of primary colors and wherein the step of applying a second halftoning technique adds at least a first additional color to a portion of one or more of the dots assigned to a first of the primary colors based on the first halftoning technique.

7. (previously presented) The method of claim 1 further including the steps of receiving a target printing press selection command and selecting parameters for the second halftoning technique based on the target printing press selection command.

8. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique and the step of applying a second halftoning technique are applied as part of a single simultaneous process.

9. (previously presented) The method of claim 1 further including the step of printing the data with an ink-jet proofing printer different from the target halftone printing press.

10. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique results in lightening colorant values for at least some areas of at least some of the dots from the first halftoning technique.

11. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second

halftoning technique causes the complete lightening of colorant values for at least some areas of at least some of the dots from the first halftoning technique.

12. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the substitution of colorant from at least some areas of at least some of the dots from the first halftoning technique with a different colorant.

13. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the overlaying of a different colorant on at least some areas of at least some of the dots from the first halftoning technique.

14. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the creation of a plurality of areas of a same color within at least some of the dots from the first halftoning technique.

15. (previously presented) The method of claim 1 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the creation of a plurality of areas as individual pixels.

16. (previously presented) The method of claim 1 further including the step of receiving spot color print data for a same print job for which the primary color print data is received, and wherein the step of applying a first halftoning technique is applied to the spot color print data in addition to the primary color data.

17. (currently amended) A proof generation apparatus for proof printers, comprising:

a primary color print data input responsive to a first halftone processor employing a first halftone technique, wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

a second halftone processor employing a second halftone technique, wherein the first and second halftoning techniques are different and are selected to:

- (a) cause a dot size in the data provided to the print data input to substantially match a dot size for the halftone printing press; and
- (b) substantially match the color of a print produced by the target halftone printing press, and

a processed primary color print data output.

18. (currently amended) A proof generation apparatus for proof printers, comprising:

means for receiving primary color print data to be printed on a target halftone printing press from means for applying a first halftoning technique to the print data, wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

means for applying a second halftoning technique to the print data, wherein the first and second halftoning techniques are different, anddifferent and are selected to:

- (a) cause a dot size in the data provided to the proofing printer to substantially match a dot size for the halftone printing press; and
- (b) cause a proof produced by the proofing printer to substantially match the color of a print produced by the target halftone printing press, and

means for providing the data to a proofing printer different from the target halftone printing press.

19. (currently amended) A proof generation method for ink jet proof printers, comprising the steps of:

receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied to obtain screen image data representing a

plurality of screen dots, which yield a shaded visual representation of the image when printed on a printing press,

creating one or more lightened areas where direct deposition of colorant is to be lightened inside the edge of at least some of the screen dots to be printed but where indirect deposition colorant from overlapping areas is to remain by refraining from printing a subset of pixels within the periphery of a dot, wherein the method is optimized to accurately reproduce the shaded visual image that would be printed on the printing press by:

- (a) causing a dot size in the data provided to the proofing printer to substantially match a dot size for the halftone printing press; and
- (b) causing a proof produced by the proofing printer to substantially match the color of a print produced by the target halftone printing press, and

20. (previously presented) The method of claim 19 further including a step of receiving an adjustment signal and a step of adjusting parameters of the step of lightening in response to the step of receiving a user adjustment signal.

21. (previously presented) The method of claim 19 further including the step of printing the data with overlapping dots for the overlapping raster pattern using an ink-jet proofing printer different from the target halftone printing press.

22. (previously presented) The method of claim 19 wherein the step of creating creates the lightened areas as individual pixels.

23. (previously presented) The method of claim 21 wherein the steps of creating and providing are adapted to produce complete overlap of the lightened areas.

24. (currently amended) A proof generation apparatus for ink jet proof printers, comprising:

a print data input responsive to a series of screen dots from first halftone processor employing a first halftoning technique, wherein the plurality of dots yield a shaded visual representation of the image when printed on a printing press,

embodied lightening logic for creating one or more lightened areas where direct deposition of colorant is to be lightened inside the edge of at least some of the screen dots to be printed but where indirect deposition colorant from overlapping areas is to remain, and wherein the apparatus is optimized to accurately reproduce a shaded visual image that would be printed on the printing press by:

- (a) causing a dot size in the data provided to the proofing printer to substantially match a dot size for the halftone printing press; and
- (b) causing a proof produced by the proofing printer to substantially match the color of a print produced by the target halftone printing press, and
a processed print data output for providing the data to an ink-jet proofing printer different from the target halftone printing press and capable of printing the overlapping areas.

25. (currently amended) A proof generation apparatus for ink jet proof printers, comprising:

means for receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied to obtain screen image data representing a plurality of screen dots, which yield a shaded visual representation of the image when printed on a printing press,

means for creating one or more lightened areas where direct deposition of colorant is to be lightened inside the edge of at least some of the screen dots to be printed but where indirect deposition colorant from overlapping areas is to remain, wherein the apparatus is optimized to accurately reproduce the shaded visual image that would be printed on the printing press by:

- (a) causing a dot size in the data provided to the proofing printer to substantially match a dot size for the halftone printing press; and
- (b) causing a proof produced by the proofing printer to substantially match the color of a print produced by the target halftone printing press, and

means for providing the data to an ink-jet proofing printer different from the target halftone printing press and capable of printing the overlapping areas.

26. (currently amended) A proof generation method for ink jet proof printers, comprising the steps of:

receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied, wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

lightening at least one portion of each of at least some of the screen dots inside their edges,

adding at least one region of a second color in some of the screen dots inside their edges, and

providing the screen image data to a proofing printer different from the target halftone printing press.

27. (previously presented) The method of claim 26 wherein the step of applying a first halftoning technique, the step of lightening, and the step of adding are applied as part of a single simultaneous process before the step of providing.

28. (previously presented) The method of claim 26 further including the step of printing the data with an ink-jet proofing printer different from the target halftone printing press.

29. (previously presented) The method of claim 26 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the complete lightening of colorant values for at least some areas of at least some of the dots from the first halftoning technique.

30. (previously presented) The method of claim 26 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second

halftoning technique causes the overlaying of colorant from at least some areas of at least some of the dots from the first halftoning technique with a different colorant.

31. (previously presented) The method of claim 26 wherein the step of applying a first halftoning technique employs dots and wherein the step of applying a second halftoning technique causes the creation of a plurality of areas of a same color within at least some of the dots from the first halftoning technique.

32. (currently amended) A proof generation apparatus for proof printers, comprising:

a print data input responsive to a first halftone processor employing a first halftone technique, wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

embodied lightening logic for lightening at least one portion of each of at least some of the screen dots inside their edges,

an adder for adding at least one region of a second color in some of the screen dots inside their edges, and

a processed print data output.

33. (currently amended) A proof generation apparatus for proof printers, comprising:

means for receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied, wherein the first halftoning technique is at least comparable to a target halftoning technique used by the target halftone printing press,

means for lightening at least one portion of each of at least some of the screen dots inside their edges,

means for adding at least one region of a second color in some of the screen dots, and

means for providing the screen image data to a proofing printer different from the target halftone printing press.

34. (currently amended) A proof generation method for proof printers, comprising the steps of:

receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied, wherein the first halftoning technique produces a plurality of dots and is at least comparable to a target halftoning technique used by the target halftone printing press,

altering at least a plurality of areas distributed within the edges of at least some of the dots with substantially the same color alteration, wherein the step of altering alters the areas to include a same color that is different from the color of the dots, and

providing the data to a proofing printer different from the target halftone printing press.

35. (cancelled).

36. (currently amended) The method of claim 3534 wherein the step of altering operates according to a set of primary colors that is adjusted to increase the altering of at least a first color by a second color in favor of a decrease in the altering of the first color by a third color that is darker than the second color.

37. (previously presented) The method of claim 34 wherein the step of altering alters the areas to lighten the color of the dot.

38. (previously presented) The method of claim 34 wherein the step of altering alters dots corresponding to a spot color defined by the print data to match the spot color.

39. (previously presented) The method of claim 34 further including the step of printing the data with an ink-jet proofing printer different from the target halftone printing press.

40. (currently amended) A proof generation apparatus for proof printers, comprising:

a print data input responsive to a first halftone processor employing a first halftone technique, wherein the first halftoning technique produces a plurality of dots and is at least comparable to a target halftoning technique used by the target halftone printing press,

embodied altering logic for altering at least a plurality of areas distributed within the edges of at least some of the dots with substantially the same color alteration that alters the areas to include a same color that is different from the color of the dots, and

a processed print data output.

41. (currently amended) A proof generation apparatus for proof printers, comprising:

means for receiving print data to be printed on a target halftone printing press to which a first halftoning technique has been applied, wherein the first halftoning technique produces a plurality of dots and is at least comparable to a target halftoning technique used by the target halftone printing press,

means for altering at least a plurality of areas distributed within the edges of at least some of the dots with substantially the same color alteration that alters the areas to include a same color that is different from the color of the dots, and

means for providing the data to a proofing printer different from the target halftone printing press.

42. (previously presented) The method of claim 1 wherein the step of receiving, the step of applying a second halftoning technique, and/or a step of applying the first halftoning technique are at least partially combined such that the steps of applying the first and second techniques overlap at least in part.